SIEMENS

PATENT
Attorney Docket No. 2001P05854US02

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Inventor:	R. Buergel	)	Group Art Unit:	1792
		)		
Serial No.:	10/786,349	)	Examiner:	M. G. Miller
		)		
Filed:	February 25, 2004	)	Confirmation No.:	4552
		)		

Title METHOD FOR RESTORING THE MICROSTRUCTURE OF A TEXTURED ARTICLE AND FOR REFURBISHING A GAS TURBINE BLADE OR VANE

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Sir:

APPELLANT'S REPLY BRIEF UNDER 37 CFR 41.41

This reply brief is in response to the Examiner's Answer dated as mailed on 10/09/2009. This is not a substitute Appeal Brief. Any ground for rejection in Examiner's Answer that is not refuted herein is considered by Appellant to have been sufficiently argued in the Appeal Brief, such that no further comment is needed herein.

Solid state diffusion of a species into a crystal matrix requires the temperature to be above the diffusion temperature of that species. In the case of the cited Czech '545 reference, the species being diffused during the aluminizing step is aluminium, so Czech '545 teaches a range of diffusion temperatures that are above the diffusion temperature of the aluminium. The Examiner mistakenly relates the aluminizing diffusion temperature of Czech '545 to a solution temperature for one of the phases of the superalloy substrate itself. However, Czech '545 specifically cautions that "the temperature should always be kept well below the solution

temperature of the base material alloy." This means that Czech '545 is cautioning against allowing any of the phases of the base material alloy to go above its solution temperature. Czech '545 is concerned only with allowing the aluminium to diffuse into the corrosion layer, but he does not want the base material alloy to be affected, therefore it is apparent to one skilled in the art that he is cautioning that the temperature should be kept below the solution temperature of all of the phases of the base material alloy. Accordingly, Czech '545 teaches away from all of the presently pending claims.

Respectfully submitted,

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